DOCUMENT RESUME

ED 386 068 FL 023 233

AUTHOR Falvey, Margaret
TITLE Using Concurrent Verbal Reports as Teaching Tools in Language Teacher Education.
PUB DATE 94
NOTE 21p.; In: Bird, Norman, Ed., And Others. Language and Learning. Papers presented at the Annual International Language in Education Conference (Hong Kong, 1993); see FL 023 205.
PUB TYPE Speeches/Conference Papers (150) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cognitive Processes; Elementary Education; Language Teachers; *Protocol Analysis; *Reading Instruction; *Reading Processes; Second Language Instruction; *Second Languages; Teacher Education

ABSTRACT

As an exercise in understanding the cognitive processes underlying reading, second language teacher trainees were asked to read a text and say aloud everything they said to themselves silently. the text used, a rhyme-riddle intended for use with elementary school learners of English as a Second Language, was appropriate for the students, required complex processing, and presented some reading problems. Because of the nature of the text, it was expected that verbal reports would reflect a wide variety of reading processes, types of problems that learner-readers may encounter, and strategies that skilled readers use to deal with them. Results from verbal reports concurrent with the subjects' first reading of the text provide evidence of both automatic and controlled text processing, on-line and off-line processing, activation of both content and formal schema, and interaction between these and the subjects' perceptions of macro- and micro-structure. They also indicated that nature and causes of some reading problems encountered by learners. Excerpts from individual verbal reports are presented and analyzed. The exercise was found useful for raising teacher-trainee awareness of processes involved in reading. Contains 12 references. (MSE) questions and coding taxonomy as well as the post-reading interviews

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 386 068

USING CONCURRENT VERBAL REPORTS AS TEACHING TOOLS IN LANGUAGE TEACHER EDUCATION

MARGARET FALVEY

BEST COPY AVAILABLE

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. L. Clark

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

FL023233

USING CONCURRENT VERBAL REPORTS AS TEACHING TOOLS IN LANGUAGE TEACHER EDUCATION

Margaret Falvey

Introduction

In an age of rapid technological advance, higher order reading skills are now essential as a means of access to new information. As a result, it is even more important than before that language teachers should be aware of the many and complex processes involved in reading and that their approach to the teaching of reading should be based on a firm theoretical underpinning.

As knowledge about the nature of the reading process has increased, however, so has the content-load in this aspect of language teacher education programmes. Further increases in this content-load have resulted from, for example, research into the nature of learning. As the volume of theory grows so does the risk that it will be rejected by student-teachers as having no relevance for classroom practice. If this happens the theory will have no influence on their teaching post-course even though they may pay lip-service to the theory during the course in order to obtain their qualification. Achieving the right balance between theory and practice is therefore important on initial teacher education programmes if the programmes seek, to:

1. have long-term effects on teacher thinking and teacher practice and

2. provide an appropriate foundation for future in-service teacher-education programmes.

This means that the approach to theory must be selective.

Approaches to the role of theory in education courses

One approach, no longer regarded as acceptable, was to select one theoretical position, either the most recent or merely that preferred by the teacher educator, present it as 'The Way' and concentrate on giving student-teachers practice in applying it in the classroom. Student-teachers completed such courses unaware of alternative views and lacking skills as critical consumers of research. As a result, they were ill-equipped to understand, let alone apply, theoretical views which emerged after their professional careers had commenced.

Another approach has been to provide student-teachers with a broad introduction to theory in the relevant area and then require them to do a lot of reading, culminating in written assignments to demonstrate their understanding.

Unfortunately, student-teachers are often reluctant to read research papers. They are put off by the statistics, the language and particularly by the de-humanising way in which some researchers treat their human subjects and write about them. They are also sceptical about the value of data obtained under laboratory conditions rather than in every day classrooms. Student-teachers are not, of course, alone in this view; the development of alternatives to the logical-positivist approach, to the experimental approach and to some aspects of quantitative research have come about because researchers into education, amongst others, hold similar views.

An alternative approach

An alternative approach to those described above is preferred by this researcher. This is a 'grounded theory' approach in which the theory and the research design are developed from and informed by data (Glaser and Strauss 1967, Hammersly and Atkinson 1983). In this case the student-teachers first encounter research data and then explore and discuss them in order to create a shared context and shared information for discussion of different theoretical perspectives. In the case of research into reading, concurrent verbal reports would appear to offer ideal data for this purpose for two reasons. First the data are very clearly generated by the individual subjects and are full of 'human touches.' Secondly concurrent verbal reports reveal not only the cognitive processes involved in reading but can also, under certain conditions, reveal the sort of problems that readers, particularly student readers, may encounter when trying to understand text. Published research is not the best source of data in this case, however, because research papers do not usually offer data in the form needed for this purpose. They tend to report findings and results rather than raw data and presenting these to student-teachers has the drawbacks already discussed above.

Finding suitable data

If, despite the problems discussed above, the teacher educator feels that student-teachers would benefit from exploring data obtained through verbal reports some alternative way of creating access to these data must be devised.

This researcher has observed that subjects often become intrigued by their own cognitive processes during experiments using verbal reports. This seems to occur in much the same way as it does with clients receiving counselling who are, for example, fascinated to discover that their expectations of other people are based on beliefs they were not even aware they held.

The initial stages of the present study were based on the above observations. It was anticipated that student-teachers would be intrigued by their own cognitive processes and would therefore be interested in exploring and analyzing data which revealed them. As a result the student-teachers themselves became both the subjects and the researchers in the present study.

It was predicted that the data would have high face-validity because the student-teachers, having themselves been the subjects, would know that the data were not the outcome of researcher-manipulation of subjects. It was also anticipated that the experience of being first the subjects, and subsequently the analysts of the data, would give them access to some of the formal and content schemata needed to understand lectures and discussions about research into reading. The possibility that some of them might even store this new information well enough to enable them to read research papers in this area with an initial degree of expertise and ease was regarded as an extra bonus which might encourage voluntary reading in this area, in the future, even if not during the course.

In the section below concurrent verbal reports are defined in the context of this study.

Concurrent verbal reports

In this paper concurrent verbal reports are defined as 'subjects' verbalizations elicited while-reading.' The reports in this study were elicited by asking the subjects to act as if they were alone in a room, speaking to themselves. They were asked to 'say aloud everything you say to yourself silently' (Ericsson and Simon 1993). They were asked **not** to explain their thoughts but merely to say them out loud.

The lack of coherence reported in concurrent verbal reports elicited in psychological studies is not so evident in the data reported here. Possible explanations for this are offered in the section *Problem-solving Tasks vs. Reading Tasks*.

Selecting a reading text

The selection of the text for this study was restricted by the context of implementation. The text had to have high face-validity, i.e. it had to be the sort of text that teachers need to read. It also had to be suitable for student-readers so that the complexity of the reading processes identified through the verbal reports could not be dismissed or attributed to the fact that the text required an expert reader. At the same time the text had to be authentic in the sense that it should not be the type of text commonly found in EFL textbooks which are specially written to give learners practice with particular language structures or vocabulary items. Finally it was necessary that the text should require complex processing on the part of the reader and should also present some reading problems for the readers in this study so that the resulting verbal reports would illustrate both.

The text which was used in this study meets the above criteria. It is discussed in more detail in the section *The Text and The Readers*.

Planning a learning experience vs. a research exercise

The study reported here was planned primarily as a learning experience and not a research exercise. It was not, therefore, considered desirable to try to replicate laboratory conditions in which each subject is isolated even from the researcher. The purpose was to provide a reasonably natural and shared 'reading' experience which the student-teachers could discuss while the experience was still fresh in their minds. As a result there was no training for the subjects and the usual classroom practice of working in groups was adhered to.

The student-teachers were told that the purpose of the session was to explore the processes involved in reading; to find out 'what goes on in people's heads while they read.' Each group of four chose a 'reader', or subject, who would provide a concurrent verbal report while 'reading' the passage. The 'readers' were given the instructions stated earlier in this paper. Each group also selected a person known as the 'text' who would read the selected text aloud, repeating parts of the text and spelling words aloud if asked by the 'reader', but not interacting with the 'reader' in any other way. The 'text' would not, for example, respond to questions or remarks made by the reader.

Transcripts made from audio-recordings of the verbal reports were not regarded as a satisfactory means of access to the data since it takes time to produce them and the delay could reduce both the impact of the experience and the student-teachers memory of it. Instead, instantly available verbal reports were generated by having two 'Observers' attached to each 'reader,' or subject, whose tasks were:

1. to make complete transcriptions of everything said by the subject and

2. to prompt the subject to keep talking when necessary.

The data reported in this paper are, however, based on full transcripts made from audio-recordings of the entire proceedings in the classroom.

Analysis of data

In this learning experience the student-teachers, who were both subjects and researchers, explored the initial data themselves. Since the learning experience was based on a 'grounded theory' approach there was no attempt to provide them with methods of analysis. Their initial analysis, which was conducted through group discussion of the data, was recorded and that data form part of the long-term study of which only the first stage is reported here.

The writer's own initial analysis of the data was conducted by moving around the classroom and taking notes during the elicitation of the verbal reports. This analysis was also exploratory but had a slightly different agenda in that the purpose was to

identify and label specific processes employed by the subjects to facilitate future discussion of the nature of the processes involved in reading. Although the data reported in this paper are based on transcripts of audio-recordings of the concurrent verbal reports, the commentary on the data reflects the above approach, i.e. it is exploratory and represents a 'hands-on' analysis.

The following section briefly outlines the differences between the nature of the tasks set in psychological research and those set in language education research into cognitive processes.

Problem-solving tasks vs. reading tasks

Research into cognitive processes in areas such as problem-solving employ tasks which are short and 'well-defined.' Such conditions are deemed necessary for the study of reproducible performance. A task is 'well-defined' if:

1. it has a clear focus, e.g. '48 x 27' and

2. 'only a limited number of possible sequences of thoughts will generate the correct answer efficiently' (Ericsson and Simon 1993).

The instructions for such tasks, which may involve written text, will also fulfil these conditions. The cognitive processes in the resulting verbal reports will therefore have been employed mainly to solve the problem and not to understand the instructions.

In language education research into text comprehension, however, the statement of the task and the problem itself tend to be one and the same thing, i.e. the text. The text may, for example, be a text that student-readers need to read for study purposes but find difficult to comprehend. The performance of 'expert' and 'novice' readers may be compared to identify the strategies employed by the former which could usefully be taught to student-readers (Lundeberg 1987). The reading task is therefore unlikely to be either short or well-defined as described above and comprehension will probably require interaction between many complex cognitive processes. These interactions will vary from one reader to another even in the case of 'expert' readers who are Idealised Target Readers (ITR's) (Falvey 1993), because of differences in, for example, their prior formal and content schemata. These differences will probably be greater in the case of 'novice' readers, especially if they are not even 'Marginally Related Readers' (MRR's) (Sinclair 1993). Because of these differences the resulting verbal reports can be expected to vary considerably. Reading texts, therefore, usually present 'ill-defined tasks,' which, according to Stratman and Hamp-Lyons (1994), involve one or both of the following features:

1. subjects must specify partly or completely their own goals and

2. subjects may generate many equally satisfactory solutions' (Stratman and Hamp-Lyons 1994).

The text used in this study presents an 'ill-defined task' and, since the subjects were neither ITR's nor even MRR's, individual subjects' efforts at comprehension were expected to generate a wide range of different cognitive processes. It was therefore anticipated that the verbal reports would offer evidence of a number of the different processes involved in reading, thus fulfilling the goals of the learning experience.

It was also anticipated that the verbal reports would exhibit more coherence than is the case in problem-solving studies because the selected text:

1. encourages social interaction between itself and the reader by using the first person, 'I' and 'me' and addressing the reader as 'you';

2. would require the subjects in this study to employ considerable controlled and off-line processing in their efforts to extract its meaning.

The text and the readers

The selected text is authentic in the sense that it was published in a 'fun-reading' book. The ITR's were Primary Four pupils in Eastern Nigeria who were studying English as a second language. The text is a riddle in the form of a rhyme with 6 stanzas and 4 lines to a stanza. It displays many characteristics of the genre of riddles in that the macro-structure is signalled in the title, 'What Am I?' indicating that:

- the reader's task is one of problem-solving, i.e. to guess the answer to the question in the title.

- there will be clues to help him

- these clues will probably not be explicit

- all the information given will be 'true' but many alternative meanings may need to be considered

- the problem-solving process may involve lateral thinking

Because this text is longer than the average riddle, the reader receives more clues and has more opportunities to predict and confirm predictions than is the case with most riddles or in the case of the other riddles of which the ITR's had had experience. The structure of the text is briefly outlined below:

Stanza 1: Non-explicit reference to plots of traditional African stories about the tortoise, most of which involve the cracking of its shell.

Stanza 2: Explicit references to 'tortoise stories.'

Stanzas 3-6: Explicit reference to three of these stories, the first including implicit reference and the other two making explicit reference to the cracking of the tortoise's shell.

The ITR's could be expected to predict the correct answer during the first stanza, using the remaining five stanzas to confirm their ideas. Alternatively there are four more opportunities which could be confirmed by backwards reference facilitated by the overtness of the text structure which helps the reader to remember preceding lines. Because of their previous experience of the book from which the text was selected the ITR's would expect to:

- understand the text without help from the teacher,
- enjoy reading it,
- interact with the text.

These expectations could be considered to be justified because:

- all language items, structures and vocabulary were familiar;
- none of the texts previously read would have been used to teach new language;
- the formal schema of riddles was already familiar through exposure to shorter riddles;
- the activities associated with the texts were all 'fun' activities, i.e. miming or acting out the stories or making up their own riddles;
- they possessed the necessary content schema through listening to and reading traditional African stories.

The ITR's could therefore be expected to employ mainly automatic processing while reading the text. Although the readers in this study were adults, highly educated and generally skilled readers they were, by comparison with the ITR's, operating at a disadvantage since they:

- were unlikely to have the necessary content schema;

- might lack the formal schema of riddles;

- were told that the text was taken from a Primary Four 'fun' reading book but their own learning-to-read experiences had not included reading for pleasure.

It was therefore predicted that:

- even those who had the necessary formal schema might fail to activate it on reading the title;

- all of them would have difficulty in processing the text successfully, i.e. in predicting and then confirming the one correct answer to the question 'What Am I?' with any degree of certainty.

The text was therefore considered ideal for the purposes of this learning experience and the resulting verbal reports were expected to yield a rich variety of both the processes involved in reading, the types of problems that learner readers may encounter and the strategies that skilled readers use to deal with these problems.

The Concurrent Verbal Reports

The concurrent verbal reports cited here were elicited during the first of each subject's three readings of the text. S.1-S.3. are the subjects. Text (T) is the group member who read the text, a riddle, aloud. Line numbers, given in brackets at the end of each line of the text, are inserted in the verbal reports to indicate the point in the text at which comments were made. If there is no verbalisation cited from a subject it means the text continued to be read aloud until that subject did verbalize.

Although the concurrent verbal reports shown below were elicited separately, Examples 1-6 (in response to lines 1-16 of the text) are presented together to avoid unnecessary repetition of the text.

These reports were collected primarily as part of a learning experience in which student-teachers first provided and then explored the data themselves. The commentaries reflect the 'hands-on' analysis of a teacher-educator looking for

a. evidence of the processes the subjects employed during their first reading of the text and

b. differences in the processes used by different subjects. Not all processes are commented on. Those selected are those deemed to offer:

1. easily identifiable examples of the processes,

2. examples which will encourage further discussion of the non-verbalised but inferrable processes

3. those which will encourage discussion of the multiple and complex interactions taking place between processes.

The processes identified include the following; the activation of formal and content schema (FS and CS), automatic and controlled processing (AP and CP) Schneider 1985), on-line and off-line processing (OLP and OFP), processing at the levels of macro-structure and micro-structure (MOS and MIS), the psycho-linguistic guessing game (PLG) (Goodman 1968).

Example 1. Title and Lines 1-4.

T: What Am I?
I carry my house (1)
Around on my back (2)
So I walk very slowly (3)
Because it might crack. (4)

S.2. (Title) * What am I? OK. Go on.
S.3 (2) - Em, em, it is a snail, I think. Er, is it, is it? Well, it is a snail. Go on. (laughs)
S.1 (4) - It is quite difficult to read the sentence. Let me read it again.

T: Repeats title and lines 1-4
S.1. (4) - I think I can get a rough idea of that. I think I can get a rough idea of that sentence. A boy carrying a bag. OK. Lets' go on.
S.2. (4) - So you are a little animal
S.3. (4) - I walk every day but I never thought of cracking myself. But it is a problem of a snail, a poor snail and --- go on.

Although only S.2 comments on the title, by repeating it, both S.2 and S.3 appear to have activated the formal schema (FS) of riddles. S.3 predicts 'snail' (2) and S.2. appears to both predict and confirm with "So you are a little animal" (4). The speed of response suggests that both were employing automatic processing (AP). They were also employing off-line processing (OFP) and using their prior content schema (CS) but were retrieving different information and applying it in different ways. S.3 appears to find a contradiction (4) but then confirms 'snail' with what may be another prediction. This subject seems to be formulating ideas about the macro-structure (MOS) by anticipating that the overall purpose of the text is to tell a sad story about a snail, which would not be surprising in a primary school reading

book. It seems that neither S.2 nor S.3 possess the necessary CS. The use of 'you' suggests that S.2 is interacting with the text in response to 'I.'

S.1. seems to be in trouble, the FS for riddles does not seem to have been activated. This may be because, knowing this text is a primary school reading text, she does not expect something frivolous. She interprets the 'I' as:

a) human and

b) child.

Example 2 (lines 5-8):

T: Don't you believe me? (5)
It's happened before. (6)
You remember the stories (7)
You've heard them I'm sure (8)

S.3 (7) - (interrupts) What. what, stop. It happened to the snail before, that means the snail cracked himself before. And then, go on.
S.1 (8) - Who is **that** you? Maybe I'll read it further to find out who is you.
S.2 (8) - What kind of story?

There is a distinct change in the text in these 4 lines: the reader is directly addressed as 'you' and is presented with a challenge, followed by a statement and then a reference to CS which is clearly assumed to be shared. Since it is not shared by these readers, one would anticipate some sort of reaction.

S.3 appears to respond, employing AP and OFP. She interrupts the text, but seems to drop her query about the stories and to focus on the implications for the MOS. She re-formulates her thinking to allow cracking shells to fit with her prediction of a sad story. S.2 does respond (AP and OFP) but does not follow up. S.1 is provoked but does not relate to the 'you' interactively. Instead she wonders who 'you' is. This subject seems to assume that the text itself will ultimately make everything clear and that information in the text will be 'literally' true. She does not seem prepared to make inferences even through controlled processing (CP). It seems that both 'you' and 'I' are assumed to be human.

Example 3 (Lines 9-12)

T: The bird took my feathers (9)
So I couldn't fly (10)
The ground's very hard (11)
When you fall from the sky (12)

S.1 (10) - Quite abstract, this boy's thinking. The bird took my feather. It seems that he imagines himself as a bird. Let's read further.
S.2 (10) - Oh, so you are not a bird.
S.3 (10) - Hold on, the birds, would you repeat that again?

T: Repeats lines 9 and 10

S.3 (10) - The bird took his feathers, so it is not a snail. Go on.

S.2. uses AP and OFP to rule out one unpredicted possibility and continues to address the text as 'you.' S.3 is also using AP. There is a delayed reaction to the birds and then a different inference which rules out her original prediction 'snail.' S.1. seems surprised by the nature of the text, by the level of abstraction, so one would expect some re-formulation of her expectations about the text. She makes a tentative inference using AP and OFP and then moves to CP. Perhaps this subject has assumed that in a primary level text all personal pronouns, with the exception of 'it', will refer to humans. As before, her solution is to proceed with reading rather than resort to CP or OFP.

Example 4.

T: The ground's very hard (11)
When you fall from the sky (12)

S.1 (12) - It seems that he really thinks that he is a bird.
S.2 (12) - What kind of animal you are? (laugh)
S.3 (12) - Hold on, how do you spell the word 'ground'?

T: * G_R_O_U_N_D

S.3. * Oh, the ground's very hard, OK go on.

T: Repeats line 12

S.3. * the ground's very hard when you... go on.

S.1 uses AP and OFP and finds confirmation of her inference but considers it unreal or unlikely. S.2 is still interacting with the text, using AP and OFP. She is sure that 'I' is an animal but finds nothing on which to build a further prediction. S.3 thinks she has misheard and asks for a word to be spelled out loud. Her next comment suggests that while lines 11 and 12 then make literal sense, she is, nevertheless, still trying to make sense of the last 4 lines in the context of her previous interpretation. She may be trying to rationalise her first prediction of 'snail' to make it fit with the new information that has come on-line or she may be

trying to re-interpret, or 'tune' (Rumelhart and Norman 1978), the new information to make it fit with her predication of 'snail.'

Example 5 (lines 13-14).

T: The monkey tricked me (13)
With his tail I fell (14)

S.1 * Hm, monkey? Oh, er, that, before he said he is a bird. But now why is there come out a monkey? I will read further to find out the answer.
S.3 * (Interrupts) Could you repeat that again?

T: Repeats lines 13 and 14
S.3 * With his tail? How do you spell the word 'fell'?

T: F_E_L_L_
S.3 * The monkey tricked me with the tail I fell what?

T: Repeats lines 13 & 14
S.3 * That's the end? (laughs)

S.3 seems to be experiencing learner-confound. She requests repetition and the spelling of words, for example. She may, however be re-processing, or trying to tune, the textual information given so far. She seems to react against the partial text, caused by her own interruption.

S.1 is using CP and OFP but she is still in a very literal world and still relying on the text to reveal all.

S.2 is silent.

Example 6.

T: Down through the branches (15)
Another cracked shell! (16)
S.2 * You live on the tree?
S.3 * Can you repeat that sentence, start from, read from 'the birds took my feathers--'

T: Repeats lines 7-14.
S.3 * That's the end? OK, go on.

S.2 seems to be considering different types of animal. She infers the habitat of 'I.' Good examples of AP and OFP. S.3 seems to be reviewing all the textual information with which she has experienced a problem. She specifically asks the text to repeat from "the birds took my feathers..." Interesting that she remembers the exact words which suggests that the linguistic data is easy to handle but the semantic data is not. She doesn't seem very happy by the end of the repetition, however, as though she expected a 'click of comprehension' (McLeod and McLaughlin 1986) which didn't come. This subject seems to have a grasp of the MOS and is focusing on those elements in which she expects to find a solution. She seems to be quite clear about the roles of lines 1 to 8 in the MOS and also that lines 9 to 14 merit attention.

S.1 makes no comment here. In fact, after a pause the text went straight on to the next two lines (17 and 18). S.1 didn't interrupt or comment until the end of line 18 (see Example 9).

Subjects' verbal reports in response to lines 17-24, see below, are presented separately in Examples 7-9 for ease of reference.

Example 7 (lines 17-24).

(S.3. only).

T: Trying to save money (17)
By making some oil (18)
I climbed on the pot (19)
As it started to boil (20)
But the pot was too hot (21)
And I started to fry (22)
So I jumped to the ground (23)
Oh! I wish I could fly! (24)

S.3 (23) - (Interrupts after 'jumped' in l.23)
Er, hold on, the birds took his feathers, something, something that has feathers, and then being fell, it couldn't fly because it doesn't have feathers, then, the monkey (laughs), the monkey tricked it with its tail, then, er, then he try to sell, what, make money? Read from the tail, that part.

T: Repeats lines 13-21.

S.3 (Interrupts after 'pot' in l.19).
Trying to make, hold on, er, I guess oil makes a lot of money. And er well, you can use oil for many things, right? So, of course, it makes money. I hope I can have oil. Maybe. Large piece of land, lots of oil underground, then I can make money from that, well, go on. Trying to the pot...what? Go on.

T: Repeats lines 17-21.
T: Reads lines 22-24.
S.3. (24) - Well, well, if the, something that couldn't fly because the birds took his feathers, so it tries to fly but it couldn't, it tries to jump, er--, OK, starting from I climbed on the pot
T: Repeats lines 19-24
S.3. * Er, go on. That's the end? Em, it jump to the ground and then, well starting from 'I climb on the pot' again

T: Repeats lines 19-20 again
S.3. * (Interrupts) I jump to the ground, I wish I could fly, because the pot was too. because the pot was too, well, the pot was boiling, of course it was hot, so because it's hot, it wants to escape from it, so it jump. Where does it jump? Jump from the pot, jump from the pot. So this thing it crack its shell, somebody, the bird takes his feathers, he couldn't fly, jump? what is it? I cannot make any meaning from it (laughs) I can't think of anything. Well, start from the beginning again.

(End of Subject 3's first reading)

S.3 is still working on elements of the MOS, trying to re-organise the textually new information in lines 9-14. Although her first comment looks like CP, one can infer a lot of AP, involving interaction between the subject's own prior schema and the textually new information. Her apparent errors, the notion of 'selling oil' and 'making money' strongly indicate AP. In her second comment this subject is determined to 'make sense out of nonsense.' She is involved in extensive OFP and in complex interaction between her prior CS and textually new information. The comments about lots of land and oil underground suggest she has animal habitats in mind and then it is clear that the 'pot' doesn't fit into this new schema or with the idea of an animal.

By the end of the last line the 'I' has become a 'something' and S.3 has identified some of 'its' characteristics. She seems to infer that: with feathers it could fly; then without feathers it couldn't fly; it jumps or it tries to jump. Then, however, 'the pot' causes a problem again. After the requested repetition of lines 19-24 the subject is surprised that this is the end of the text. She then goes back to the problems with 'jumping' and 'the pot.' After another repetition, this time of lines 19-20 only, she interrupts, summarises the contradictions and explains some of them to her own satisfaction. She then reviews the important characteristics until she gives up and asks for another reading. Once again this subject demonstrates complex interaction between her perceptions of the MOS and MIS, her own prior CS and textually new, but already processed information. Most of this part of her report involves CP and OFP.

Example 8 (lines 17-24).

(S.2. only).

S.2 (19) * You are making money?

T: Yes (should not have responded)

S.2 * I don't understand... he make money.... as you said. Could you repeat this sentence?

T: repeats lines 17 and 18.

S.2 * save some money by making oil. Go on.

T: Reads lines 19-20.

S.2 * Pot. How to spell pot?

T: P_O_T

S.2 * Ah-ha. Then what happened to you? Is it very hard? And are you an ant or something else? Go on, go on.

T: Reads lines 21-23.

S.2 * (Interrupts after "I" l.23)
Started to fly? You have read... you just say you haven't got your feathers. Go on, go on.

T: Reads lines 23-24.

S.2 * But you can't fly now. I still don't have any idea what kind of animal you are--- you live on the tree, you have no feathers. How can you fly? go on (laughs)----Would you please go on?

T: That is the end.

S.2 * Could you repeat all the passage again?

(End of Subject 2's first reading)

S.2 has a problem with the idea of an animal making money. Her interaction with the 'I' in the text is confirmed by her confusion when the text actually answered her question. This subject employs automatic processing to retrieve, from her prior content schema, an animal (insect) that is likely to 'climb on a pot', an ant, but isn't entirely happy with this choice. She then mishears 'fry' and hears 'fly' instead. The text definitely said 'fry' however. This 'error' does not seem to be the outcome of problems with 'l' and 'r' sounds. In fact it is quite a logical 'error' in the context. The subject's exposure to the textually new information and to the linguistic forms used so far in the text would make 'fly' an expected action whereas the only contextual preparation for 'fry' is the word 'pot.' Since this subject perceives 'I' as an ant, she is unlikely to consider 'I' as part of the food in the pot and is more likely to regard the ant as an undesirable extra. Why then should she expect him to be fried? Much more likely that the ant 'started (tried) to fly' in

order to escape from the hot pot. She reacts against the contradiction using OFP but does not pursue it once she hears line 24. This subject then reviews certain aspects of the textually new information but re-confirms the contradictions she had identified earlier. Like S.3, she demonstrates complex interactions between her own prior CS and recently processed textual information using CP and OFP. She too assumes that there will be more text.

Example 9 (Lines 17-24).

(S.1 only)

T: Reads lines 17-18.
S.1 * Trying to save money by making----? Oh, maybe. Repeat that sentence.

T: Repeats lines 17 & 18.
S.1 * Oh, trying to save money by making some oil? Maybe I'll read further.

T: Reads lines 19-20.
S.1 * Pot? What's the spelling, the spelling of the word 'pot'?

T: P_O_T_, pot. .
S.1 * As it started to boil? repeat that sentence.

T: repeats lines 17-20.
S.1 * Oh, climb on the pot, it started to boil? Is there any relationship with the money and save money then? It seems that it hasn't any relationship at all. But... let's read further then.

T: Reads lines 21-24.

S.1 * Oh, it seems that, does it mean, does it mean that he has fallen into the pot and fly again. Maybe, er, I read, er, repeat the sentence then.

T: Repeats lines 21-24.
S.1 * Oh, it seems that he is still imagine himself as a bird, just like at the beginning of the passage. I think that is----- Maybe I'll read it once again to get more idea.

(End of Subject 1's first reading)

During lines 17-20 S.1 seems to be experiencing serious learner confound and appears unable to process the text in units of meaning, focusing instead very much at word-level and forgetting, or ignoring, lines she has just heard. The continuing

mention of 'relationship' seems to refer to a relationship between words, or types of words, rather than to relationships between units of meaning and suggests that she is using a strategy of 'word-matching' which is unfortunately sometimes taught as an aid to comprehension. As a result she is operating only at word-level most of the time. By the end of line 24 she moves tentatively into OFP but is still operating very literally.

Conclusions

Data from the first set of concurrent verbal reports provide evidence of AP, CP, OFP, OLP, activation of CS and FS and interaction between these and the subjects' perceptions of MOS and MIS. The reports also demonstrate the nature and causes of some of the reading problems encountered by learners. The data therefore meet the needs of the learning exercise. In addition, they create openings for the discussion of a number of issues related to the teaching and learning of reading.

The fact that none of the subjects got the 'right answer' emphasises the importance of prior CS and offers evidence that some of the problems that foreign language learners experience with reading may be precisely that, i.e. reading problems, not language problems. The data contradicts the popular assumption that the answer is always 'in the text', literally and demonstrates the importance of OFP and interaction between prior CS and textually new information. The data shows that even young readers, faced with a linguistically 'easy' text, need to employ many complex processes including, amongst others, OFP, OLP, AP and CP and to interact with the text at the level of MOS as well as MIS. This illustrates the need for young readers to learn:

1. to operate at the level of discourse instead of operating at word or sentence level only and

2. to activate their own CS and FS instead of relying on teacher interpretation (Falvey 1986).

The many differences between the three verbal reports offer rich material for discussion of the importance of recognising that different readers process text in different ways.

The reports of S.1 and S.2 yield good examples of Goodman's 'psycho-linguistic guessing game;' S.1's report demonstrates the disadvantages of not playing the game. In an educational context in which 'right answers' have more value than alternative legitimate interpretations and in which guessing is frowned upon the relative success of subjects 2 and 3, who were guessing, provides a useful contrast with the relative failure of subject 1.

Some of the apparent 'hearing' errors, or slips made by subjects when repeating text, provide evidence that skilled readers do not faithfully store the exact words they read. Instead they store the meanings that have emerged as the result of processing. This aspect of the data provides a good introduction to the issue of testing reading competence by making learners read aloud and checking on their 'accuracy.' Such discussion is further enriched by the retrospective verbal reports from the 'texts' who said they were 'unable to think about extracting meaning' because they 'had to concentrate on reading aloud.'

The subsequent classroom discussions on reading processes and reading problems were based on explorations of three sets of data all of which were collected in the same session:

1. the concurrent verbal reports cited in this paper
2. two further concurrent reports elicited during each subjects' second and third readings of the text
3. retrospective reports elicited in groups consisting of
   a. the three subjects,
   b. the three texts and
   c. the six Observers.

The data proved very accessible to the student-teachers. The role of the teacher-educator was mainly that of supplier of meta-linguistic labels.

It appears from the data described above that concurrent verbal reports are useful tools for raising student-teachers' awareness of the processes involved in reading. It is worth considering whether there are any other research tools which could be used or adapted for pedagogic purposes in teacher education.

References

Ericsson, K.A. & Simon, H.A. (1993). *Protocol Analysis: Verbal Reports as Data: A Bradford Book,* Cambridge, MA: MIT Press.

Falvey, M.A. (1986). The Reading Teacher's Dilemma. *Working Papers in Linguistics and Language Teaching,* April 1986:44-57. Hong Kong: University of Hong Kong, Language Centre.

Falvey, P. (1993). Towards a Description of Corporate Text Revision. Unpublished Ph.D. thesis, University of Birmingham.

Glaser, B., & Strauss A. (1967). *The Discovery of Grounded Theory.* Chicago, IL: Aldine.

Goodman, K. (ed.), (1968). *The psycho-linguistic nature of the reading process.* Detroit, IL: Wayne State University Press.

Hammersly, M. & Atkinson, P. (1983). *Ethnography: Principles in Practice.* London and New York: Routledge.

Lundeberg, M.A. (1987). Metacognitive aspects of reading comprehension: Studying understanding in legal case analysis. *Reading Research Quarterly,* 22(4):408-432.

McLeod, B. & McLaughlin, B. (1986). Restructuring or Automaticity? Reading in a Second Language, *Language Learning,* 30(2):109-121.

Rumelhart, D.E. & Norman, D.A. (1978). Accretion, Tuning and Restructuring: Three Modes of Learning. In J.W. Cotton & R.L. Klatzky (eds.), *Semantic Factors in Cognition*, Hillsdale, NJ: Lawrence Erlbaum Associates.

Schneider, W. (1985). Toward a Model of Attention and the Development of Automatic Processing. In M.I. Posner & O.S.M. Marin (eds.), *Attention and Performance XI.* Hillsdale, NJ and London: Lawrence Erlbaum Associates.

Sinclair, J.McH. (1992). Writer, Text and Reader. Unpublished paper, University of Birmingham.

Stratman, J.F. & Hamp-Lyons, L. (in press). Reactivity in Concurrent Think Out Loud Protocols. In P. Smagorinsky (ed.), *Verbal Reports in the Study of Writing: Problems and Potentials.* Newbury Park, CA: Sage Publications.